

MAP OF THE WORLD

BY

ALONZO DE SANTA CRUZ

1542.

EXPLANATIONS

BY

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THE maps drawn by Spanish, Portuguese, and Italian chartographers in the age of the great discoveries, have been preserved till the present time in but few instances.

Investigators of historical geography must especially deplore the loss of the great Spanish model map, *el Padron Real*, the laying down of which was entrusted to chartographers belonging to the Council of Indian Affairs at Sevilla, who, on account of their position, had access to all the geographical material furnished by the discoveries constantly taking place in the New World. Special interest is therefore taken in the other chartographical productions which, not having been subject to the destruction caused by carelessness and vandalism, can more or less closely be traced to the work of the Sevillan school of chartography. These, as well as other maps from the period immediately following the discovery of America, are now scattered throughout the different countries of Europe, but the praiseworthy zeal of the present age has made most of them, at least the most important ones, accessible by facsimile reproductions.

Among the chartographical originals as yet published, the works of one of the most renowned of the Sevillan chartographers, ALONZO DE SANTA CRUZ, are almost entirely lacking. The large collection of maps and charts which he left at his death has been scattered and probably, with but a few exceptions, destroyed. In Spain there seems to be only a map of the Gulf of Mexico extant. This map Mr. HENRY HARRISSE in his recently published *Cartographia Americana Vetustissima*,[1] assigns to the year 1536. A number of maps

[1] H. HARRISSE, The Discovery of North America, Paris, 1892, p. 624.

are also included in the work by ALONZO DE SANTA CRUZ, *Islario general del Mundo*, existing in two manuscript copies and still unpublished. One of these maps, *Tierra que descubrio el piloto Estevan Gomez*, has been reproduced in facsimile by Mr. HARRISSE in his work cited above (Plate XI). [1]

Meanwhile, a peculiar circumstance has brought two of ALONZO DE SANTA CRUZ's maps to the far North. One of them is a most remarkable map of the City of Mexico, which is reproduced in reduced facsimile in Baron NORDENSKIÖLD's *Facsimile Atlas* (p. 109), and on which I have written a short article in the journal *Ymer*.[2] This map belongs to the University Library of Upsala. The other map which is preserved in the Royal Library at Stockholm is the map of the world which is here reproduced in facsimile. As far as my knowledge goes, only a few brief notices are given to this work in the printed literature of the day; namely, in *Ymer*, 1881, p. 52, by Dr. SIMON NORDSTRÖM, in NORDENSKIÖLD's *Facsimile Atlas*, p. 94, and the above mentioned article in *Ymer*, from my pen.[3]

How these two maps found their way to Sweden, is not known. Probably, together with other literary treasures, they were purchased by JOHAN GABRIEL SPARFVENFELDT while on the journey he made during the years 1689—94, travelling through several of the countries of Europe (Spain among others) for the purpose of looking for old manuscripts, books, inscriptions, etc., referring to the ancient Goths, who at that time, on account of the archeological fancies of OLAUS RUDBECK, were supposed to have come from Scandinavia. Printed lists of SPARFVENFELDT's contributions both to the

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[1] Mr. HARRISSE's supposition (Ibid. p. 621), that "a manuscript of the *Islario* is to be found in some public institution at Stockholm" is not correct. However, we think that we have grounds for believing that the manuscript of this *Islario* which, according to NAVARRETE, was to be found in the Royal Library at Madrid, and which, according to Mr. HARRISSE, disappeared from there within the last forty years, is nothing else than the *Islario*, bearing the name of ANDRES GARCIA DE CÉSPEDES, still preserved in the same library.

[2] Ymer, tidskrift utgifven af Svenska Sällskapet för Antropologi och Geografi. Årg. 9, Stockholm, 1889, p. 3.

[3] 1889, p. 12.

library at Stockholm and that at Upsala are extant,[1] but in neither of these lists is there any mention made of these maps.

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It is unnecessary here to attempt a minute description of the life and works of ALONZO DE SANTA CRUZ. All that is known about him is contained in the works by NICOLAO ANTONIO,[2] NAVARRETE,[3] HARRISSE,[4] and JIMÉNEZ DE LA ESPADA,[5] and I have nothing of importance to add to what they have said. I need only remind the reader that SANTA CRUZ participated in SEBASTIAN CABOT's unsuccessful expedition of 1526—30, the object of which was to take the same course as MAGELLAN, though it did not extend farther than to Rio de la Plata. It is quite probable that not only on this expedition, but even after his return to Spain, SANTA CRUZ busied himself with navigation and chartography, and acquired sufficient skill in these subjects to entitle him to the appellation, *mathematicarum omnium artium peritissimus.*[6] As early as 1536 we find him, together with other cosmographers, entrusted with finishing *el Padron General*, and in the same year he partook in a junta of pilots and cosmographers who assembled in Sevilla for the purpose of advising in regard to this work. By means of a royal cedula bearing the date of July 7, 1536, SANTA CRUZ was appointed *cosmógrafo real* with a salary of 30,000 maravedis. In 1542 we find that he gives himself the title of *Cæsaris Caroli V. archicosmogra-*

[1] Ecloga sive Catalogus librorum tum MS^{orum} tum impressorum, Hispanici præsertim idiomatis, quibus Regiam Bibliothecam adauxit vir illustris JOH. GABRIEL SPARFWENFELDT . . . rec. GUSTAVUS PERINGER LILJEBLAD. Stockholmiæ 1706.

Catalogus centuriæ librorum rarissimorum . . . qua anno 1705 bibliothecam publicam academiæ Upsalensis auxit et exornavit JOAN. GABR. SPARVENFELDIUS. [Rec. ER. BENZELIUS.] Ups. 1706.

[2] Bibliotheca Hispana, autore NICOLAO ANTONIO, T. I, Romæ 1672, p. 37.

[3] Noticia biográfica de Alonso de Santa Cruz, Madrid 1835. Reprinted in NAVARRETE's Opúsculos, T. II.

[4] Jean et Sébastien Cabot, Paris 1882, p. 173. — The Discovery of North America, Paris, 1892, p. 736.

[5] Relaciones geográficas de Indias, publicalas el Ministerio de Fomento. Perú. T. 2, Madrid, 1885, p. XXI.

[6] NIC. ANTONIO, Ibid. Vol. I, p. 37.

phus, which seems to be the Latin for *cosmógrafo mayor*, but after his death he is again officially mentioned as royal cosmographer (*cosmógrafo de Su Magestad*). After devoting himself to the writing of history he was honoured by Philip II. with the title, *Historicus Regius*. ALONZO DE SANTA CRUZ died in Sevilla, 1572.

Besides the above mentioned *Islario* and a few works on history, heraldry, and genealogy, there is still extant a treatise on navigation by SANTA CRUZ. This work, preserved in manuscript in the Royal Library at Madrid, bears the title *Libro de las longitudes y manera que hasta agora se ha tenido en el arte de navegar con sus demonstraciones y exemplos.* The question as regards the manner of determining longitude at sea, which remained an unsolved problem for two centuries, seems to have been a favourite object of study for SANTA CRUZ. As early as 1536 he is said at the above mentioned junta in Sevilla to have presented an invention for this purpose, and among the papers left at his death is mentioned a treatise in manuscript "*sobre la orden que se ha tenido en el dar de la longitud.*"

All that we have left of the chartographical works of SANTA CRUZ has already been mentioned. That this is only a small portion of the chartographical material which during a long lifetime he either produced himself, or in his official capacity collected, is quite obvious from the inventory made at his death. This inventory, which is dated in Madrid, Oct. 12, 1572, is made by JUAN DE LEDESMA "escribano de Camara de Gobernacion de Consejo de las Indias," in the presence of three witnesses, and accompanied by a receipt with a date two days later than that of the inventory, signed by JUAN LOPEZ DE VELASCO. In this receipt JUAN LOPEZ, the successor of SANTA CRUZ as Royal Cosmographer, acknowledges the reception of this collection of maps, pictures, and manuscripts, amounting to no less than 87. By two

separate receipts of Oct. 29 and Nov. 4, 1572, the same Juan Lopez de Velasco has acknowledged receiving yet another lot of maps, which obviously also belonged to those in the care of Alonzo de Santa Cruz. Among these are some maps whose titles I will here mention, because I think it quite probable that in them we shall find the famous *Padron*, now lost. They are recorded in the above mentioned receipts as follows: —

Una descripcion grande en pergamino de las provincias del Peru y tierra del Brasil y costa de la Tierra firme, de punto grande, hasta principio de Chile.

Otra descripcion del Brasil, costa de Tierra firme, Peru y Chile hasta el Estrecho, de punto grande, menor que el de la precedente.

Otra descripcion en pergamino desde las provincias que hay desde Panama y Nombre de Dios hasta pasado la Cacaleo [Zacatula?] y Yucatan, de punto muy grande.

Un rollo de pergamino grande en que está descrito la Florida, Nueva España, Tierra Firme é islas.

Otro rollo de pergamino grande, en que está descrita la Nueva España desde Tequantepeque hasta rio de Palmas, por una parte, y por la otra hasta Gereay [Tierra de Garay?].

If we exclude No. 2, which is obviously a later augmented edition of No. 1 on a reduced scale, we find that the other four maps together embrace what in 1536 might be said to be "the islands and continent which had then been discovered," or at least those portions of the New World which were then under the Spanish or Portuguese rule. Now what could four maps forming such a complete series, and in the possession of the man whose duty it was to be responsible for *el Padron*, be, if not the very *Padron* itself? Researches in the Escurial, where in 1635 we probably find the last traces of Alonzo de Santa Cruz's chartographical collections,[1] would perhaps give a decisive answer to this question.

Now on closely examining the two maps preserved in Sweden, we come to the conclusion that these must also have belonged to the collection recorded in the inventory

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[1] Vide Harrisse, Discovery of North America, p. 620.

mentioned above. The fact that they are both dedicated to the Emperor CHARLES V. and are decorated with his arms, does not necessarily signify that they have been among the personal possessions of this monarch, for many of the maps, which SANTA CRUZ had in his possession till his death, are said to have been provided with imperial or royal arms, and some of his manuscripts have been dedicated to the reigning sovereign (*dirigado al rey nuestro señor*).

The Map of Mexico seems to be designated by the following entry in the inventory: —

"Otra pergamino de la descripcion de la ciudad de Méjico."

On the other hand the map of the world we here present to the public is more difficult to identify, for the inventory speaks of no less than 24 such maps, being very briefly described. Since the work, in which this inventory has been published,[1] is not very easy of access, I will here give a list of the titles of these mappemondes. They are as follows:—

Una descripcion de todo el Orbe, en pergamino, con las armas reales y un tafetan naranjado que la cubre.

Otra descripcion del Orbe, grande, en pergamino, en puntas, con un escudo de las armas reales con un tafetan naranjado.

Otro pergamino en que está la descripcion del Orbe, en dos globos, con las armas reales.

Una descripcion universal en dos emisferios en figura de corazones, con un escudo de las armas reales, con un tafetan amarillo que cubre la descripcion.

Una descripcion universal en figura de un sol, con un escudo de las armas reales cubierto el pergamino con un tafetan naranjado.

Un rollo de pergamino con una descripcion universal, en cuatro ovados ó cuarterones, de la superficie de un globo, con un escudo de las armas reales cubierto con un tafetan carmesí.

Otro rollo de pergamino con una descripcion universal en figura de un corazon, con un escudo de las armas reales con un tafetan morado que le cubre.

Otro rollo de pergamino con una descripcion universal, con un escudo de las armas reales y un tafetan morado que cubre el pergamino; está en forma de corazon algo ancho.

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[1] Relaciones geográficas de Indias. Tomo II, Antecedentes, p. XXX—XXXVI.

Otra descripcion del Orbe en dos círculos redondos, con las armas reales y el tafetan amarillo.

Otra descripcion en pergamino del Orbe, en dos globos, con un escudo de las armas reales y tafetan amarillo.

Otra descripcion del Orbe en dos círculos á manera de corazones, armas reales y tafetan encarnado.

Otra descripcion del Orbe en pergamino grande, largo, con un tafetan de tornasol con un escudo de las armas reales.

Otro pergamino en que está la descripcion del Orbe en un círculo redondo con dos óvalos Norte Sur, armas reales, cubierto con un tafetan encarnado.

Otro pergamino en que está la descripcion del Orbe en dos círculos aovados puestos en cruz, con las armas reales, cubierto de tafetan amarillo.

Otro pergamino en que está la descripcion del Orbe en un redondo astrelábico; armas reales, tafetan encarnado.

Otro pergamino en que está la descripcion del Orbe á manera de estrella, con un escudo, armas reales, cubierto con un tafetan naranjado.

Otra descripcion en pergamino de todo el Orbe, en dos círculos redondos, divididos por la equinocial, tafetan naranjado.

Otra descripcion del Orbe en dos círculos redondos con escudo real con unas rayas á manera de destrolabio, tafetan naranjado.

Otro pergamino en que está en dos círculos redondos el Orbe á manera de destrolabio; armas reales, tafetan encarnado.

Otra descripcion del Orbe en figura oval con un escudo, armas reales, tafetan amarillo.

Otra descripcion del Orbe en figura de esfera, con las armas reales, un tafetan naranjado.

Otra descripcion del Orbe por las figuras celestes, en dos círculos redondos; escudo de armas reales, tafetan naranjado.

Otra descripcion del Orbe en pergamino en globo prolongado; armas reales, tafetan amarillo.

Otra descripcion del Orbe en figura de concha; un escudo, armas reales, cubierto con tafetan morado.

As this list shows, the man who made the inventory took great care to note the occurrence of the royal arms and even the colour of the cloth surrounding the map; but the details which chartographically characterize the maps, he despatched quite summarily. However, from the brief statements made, we draw the conclusion, that ALONZO DE SANTA CRUZ's chartographical collection included specimens of the larger portion of the projections common in the 16th

century, and besides these of some which, to judge from the incomplete descriptions, are not known anywhere else. The map which seems to be most closely identical to the one here reproduced in facsimile, is the one mentioned in the inventory as: —

Otra descripcion en pergamino de todo el Orbe, en dos círculos redondos, divididos por la equinocial.

That this map also has been of significance as an attempt at finding a projection, I shall try to prove further on.

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The general appearance and arrangement of the map will be understood by the accompanying general chart. The original is drawn on three connected sheets of parchment, the total dimensions of which are 1440×790 millimetres. The globe is divided into two hemispheres, — the north and the south, — composed respectively of 36 gores, each of which measures 10 degrees. The length of the equatorial degree is 3·4 millimetres. Thus the whole represents a globe with a radius of 194·8 millimetres.

That the map was not, however, intended to be cut up and pasted on a globe, is evident from the rest of its arrangement.

It is surrounded by a border 20 millimetres wide. The border has a red background and consists of arabesques finely executed in white and gold. A scroll with red edges, and bearing the following inscription, runs along the whole length of the map.

Nova verior et integra totius orbis descriptio nunc primum in lucem edita per Alfonsum de Sancta Cruz Cæsaris Charoli V. archicosmographum. A. D. MDXLII.

In the lower left-hand corner, surrounded by a richly ornamented border, is a dedication to the emperor, the wording of which I will return to later on, and between the

two hemispheres is a black eagle with the imperial arms, a reproduction of which ornaments the title page of this work.

The coast-line is marked with green and the land is pale yellow. The mountains are green and the rivers dark blue; small islands being blue or gilded. In the interior of the continents, which are almost totally devoid of names of places, there are rude pictures of men with spears, or bows and arrows, and several different kinds of animals, such as deer, camels, elephants, ostriches, crocodiles, basilisks, etc. Of the effigies of the rulers of different countries so common on the maps of the sixteenth century, there is only one on this map, viz., a figure representing Prester John of Ethiopia. Under this figure there is an inscription given on page 38. Representations of ships are entirely wanting.

The names, which amount to about 1,240, are written with black and red ink, in a dainty hand which is sometimes very difficult to read on account of its being so extremely minute.

Every fifth meridian and every tenth parallel are drawn in black; the equator, tropics, polar circles and prime meridians are gilded. The degrees of longitude are reckoned both east and west from a prime meridian (*Meridianus verus*) which runs a little west of the island of Fayal in the Azores, and in the eastern hemisphere passes through Java and Anam, thus showing Asia extending about 40 longitudinal degrees too far to the East. Long. 10° E. from this prime meridian we find what is called "*Meridianus Tholomæi.*" This meridian, which is the Fortunate Meridian of the ancients, passes between the Gran Canaria and Teneriffe islands. On long. 20° W. we find the papal line of demarcation (*Meridianus Particionis*). It crosses America at the mouth of the Amazon, but assigns all the land east of the mouth of the Ganges to "*Hemisperium Regis Castelle,*" which is distinguished from "*Hemisperium Regis Portugalie*" by the flags of Spain and Portugal drawn on the southern hemisphere on either side of the line of demarcation.

Besides the usual division into latitudinal degrees, the map is provided with *climates* and *parallel zones.* This

division is made according to two methods, — an old and a new one. The old one, which at the first meridian of the southern hemisphere is mentioned as, "*paralellos y climas segun los antiguos — los dias maiores que ay en alturas hasta 63 grados,*" in perfect harmony with Ptolemy embraces 7 climates and 21 parallel zones. The new one mentioned as: "*climas i paralellos segun los mas modernos,*" represents at 160° W. long. of the north hemisphere no less than 24 climates and 68 parallel zones, with the longest days being respectively 24 hours and 170 days. I am not informed who are the "modern" authorities, here mentioned; neither have I seen a similar division into climates and parallels on any map which has come under my observation.

The map is also provided with a scale af miles (*Scala leucarum*) which shows the length of the equatorial degree to be 17$^1/_2$ Spanish leagues.

The map is in most respects very well preserved. A crack in the parchment, beginning north of the Black Sea and extending through the whole of Asia across China to the edge of the map, has been mended by fastening a strip of parchment on the back of the map the whole length of the crack. On the east coast of South America, several names have been obliterated by spots made by some kind of fluid, and have afterwards been touched up by an unskilful hand.[1] At a later date the map has been bordered with green silk ribbon and mounted on black wooden rollers. It is now preserved in a cylindrical pasteboard case bearing the following inscription: —

Alfonsus de Sancta Cruz,
Totius orbis descriptio
1542.

On the back of the parchment, "No. 51" is twice written, probably not later than the 17th century.

[1] Vide page 46 below.

We have a somewhat more extensive description of one of ALONZO DE SANTA CRUZ's maps of the world than the brief information contained in the inventory cited above. This description, cited by HARRISSE,[1] is to be found in a work by VANEGAS DE BUSTO, bearing the title of *Las diferencias de libros que ay en el Universo*, Toledo, 1540. Here we find in Chap. XVI the following: —

Ora nuevamente Alonso de Santa Cruz, a peticion del Emperador, ha hecho una carta abierta por los meridianos, desde la equinocial á los polos; en la qual, sacando por el compas la distancia de los blancos que hay de meridiano á meridiano, que da la distancia verdadera de cada grado, reduciendo la distancia, que queda, á leguas de linea mayor.

Here reference is very evidently made to a map, which must be at least two years older than the one before us. But the expression: "open along the meridians from the equator to the poles," does not allow of the slightest possible doubt that the map which VENEGAS DE BUSTO has described was executed in the same manner as the one here presented. Mr. HARRISSE has expressed the supposition that the former map was "an application of the method which the celebrated cosmographer had invented for obtaining the longitude at sea," but the words quoted from VANEGAS seem, more probably, to infer that this map is an essay toward a projection by means of which the whole surface of the earth might be represented without distorting distances and proportions. This is supported by the above mentioned dedication on the map of 1542, which is as follows: —

Potentiss. Cæs. Carolo V. Vsi sumus et hic ad terræ, marisque simul, demonstractionem, sectione alia, Augustiss. Cæsar, per equinotialem lineam Polum quemque, dividui ipsius globi, singula medietas obtinens, depressoque utroque in planum Polo, equinotialem ipsam secantes, rationem prospectivam servavimus, quemadmodum et in alia, veluti solutis Polis, itidem in planum discisis meridianis propalavimus, neque pretermissis hic longitudinum latitudinumque graduum parallelorum climatumque dimensionibus. Vale.

[1] The Discovery of North America, p. 620.

[2] A map in similar projection by ANTONIUS FLORIANUS UTINENSIS was published by Baron NORDENSKIÖLD in his Facsimile Atlas, Fig. 48.

O powerful Cæsar! we have, here also in this map of land and sea, made use of a new division of the globe; namely, at the equator, so that each half of the globe thus divided has one of the poles as its centre. By depressing the pole to the plane of the equator and by making incisions from the equator to the pole, we have made a projection similar to that presented to the public on the other map with detached poles and with the meridians separated on the same plane, without disregarding the correct dimensions of the longitudes, latitudes, degrees, parallels, and climates.

The words "*et hic*" and "*et in alia*" probably refer to a similar but older map, very likely the one mentioned by VANEGAS, and the last sentence in the dedication shows that the object of the map was, more than everything else, to preserve correct proportions.

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This map of the world by ALONZO DE SANTA CRUZ is dated 1542, but does not, however, take into consideration all the chartographical works then published, neither are all the discoveries recognized that were made up to that time.

If, in trying to determine the authorities used by SANTA CRUZ, we direct our search toward Scandinavia, we find that here the map is in perfect harmony with DIEGO RIBERO's map of the world of 1529,[1] which again, in this regard, is only a slightly altered copy of the map of the North, first printed in Ulm 1482[2], the origin of which we can trace to Scandinavia's oldest chartographer, the Dane, CLAUDIUS CLAVUS or NIGER, living in the beginning of the 15th century. Thus we find that SANTA CRUZ was not acquainted with either

[1] I here refer to the RIBERO map, preserved in *Collegium de Propaganda fide* at Rome, and which I know through the facsimile prepared by W. GRIGGS, 1887. Of RIBERO's Weimar map I only know KOHL's reproduction of the American part and LELEWEL's reduced map of Africa.

[2] Facsimile in: A. E. NORDENSKIÖLD, The Voyage of the Vega round Asia and Europe, Vol. I, London 1881, Pl. 1.

Jacobus Ziegler's map of 1532,[1] or Olaus Magnus's far better map which was issued in Venice in 1539.[2]

According to the type of maps followed in Scandinavia, Greenland is connected with Europe, but to the North between the old and the new world a faintly indicated connection in the shape of a curve extends up to about lat. 76° N. A similar connection is to be found on Jacob Ziegler's map of the North, and on the maps of the world by Ruscelli (1544)[3] and Pedrezano (1548),[4] the two Italian editors of Ptolemy; but the theory of a connection between Europe and America does not seem to have won many supporters and soon disappears entirely from chartographical literature.

In mapping the British Isles and western Europe, Santa Cruz has followed the usual Portolano type, with such alterations as were necessary for its adaption to the network of parallels and meridians. Still greater have been the alterations with regard to the Mediterranean, which, even as late as Diego Ribero, retains the nearly correct form given it by the Portolanos, but which has here been enlarged to a length of about 57 longitudinal degrees, thus falling but little short of the exaggerated proportions given it by Ptolemy. The names on the shores of the Mediterranean are, on the contrary, entirely taken from the Portolanos, although only a small part of the names used by the Portolanos could be given on account of the reduced scale.

The coast-lines of Africa are mapped out in harmony with the charts which, in the very beginning of the sixteenth century, were drawn up while the Portuguese voyages of discovery were going on. For instance, the Cantino map of 1502,[5] Nicolas de Canerio's map,[6] and the so-

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[1] Facsimile. Ibid. Pl. 2.

[2] Facsimile in original size from the only existing copy at Munich, published by G. E. Klemming 1887. Reduced facsimile in Christiania Videnskabs-Selskabs Forhandlinger 1886 N:o 15.

[3] Vide Narrative and Critical History of America, ed. by Justin Winsor, Vol. II, Lond. 1886, p. 432.

[4] Nordenskiöld, Facsimile Atlas, Tab. XLV.

[5] Published by Harrisse as appendix to his work, "Les Corte-Real," Paris 1883.

[6] Le portulan de Nicolas de Canerio par L. Gallois. Lyon 1890.

called "King Chart," [1] which last two are supposed to have been made shortly after the above mentioned year, and the two maps of Africa in the edition of Ptolemy, printed at Strasburg in 1513.[2] On all these maps the mapping of the Red Sea is borrowed from Ptolemy, but Santa Cruz shows us this sea as it was better known after the journeys of Albuquerque (1513), Lopo Soarez (1516), and Rodrigo de Lima (1520). Santa Cruz's map differs from those of Diego Ribero in the Isthmus of Suez being given its proper width.

The coasts of Arabia, Persia, and India are copied by Santa Cruz from Ribero, or from a common authority, but the first mentioned map has several by no means immaterial improvements. For instance the Persian Gulf is more correctly drawn, the West-Indian Peninsula is given greater width, and to the Gulfs of Siam and Tonkin, which Ribero has only indicated, perfect coast-lines are given by Santa Cruz.

On both maps the name farthest to the east of the mainland of Asia is *Isla de Santa Cruz*, an island situated a little east af Canton, the most remote eastern point then explored.

Concerning the mapping of the East Indian Archipelago this map offers no improvements to that of 1529 except that the south coast of Java, and the east coast of Gilolo have been drawn. Of course the outline of the coasts of Asia is founded on Portuguese authorities of later date and more complete than the maps of the Reinels [3] and Francisco Rodriguez,[4] the only ones preserved till our day.

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The representation of the New World is, of course, the most interesting feature of the Santa Cruz map. Not only the drawing, but the names, show the characteristic features

[1] Notiee sur une mappemonde portugaise anonyme de 1502. Par. E.-T. Hamy. (Bull. de géographie historique et descriptive. Paris 1887).

[2] Nordenskiöld, Facsimile Atlas. Fig. 8 & 9.

[3] L'oeuvre géographique des Reinel et la découverte des Moluques, par E.-T. Hamy, Paris 1891.

[4] Facsimile in Santarem's Atlas.

of the Sevillan school of chartography. Here we find for the first time the name *Tierra de Panfilo Narvaez* given to those tracts called by older maps "Tierra de Garay"; but since the interior of America, as well as that of the other continents, is quite unnoticed, we cannot expect to find any other feature to remind us of the unfortunate expedition of NARVAEZ in 1528. Farther to the North we find — here as on RIBERO's maps — the names, *Tierra del Licenciado Aillon* and *Tierra de Steran Gomez*, designating the places visited by them in 1525. But farther north we find nothing on the map which intimates any knowledge of CARTIER's journeys of 1534 and 1535.

That part of SANTA CRUZ's map with which we should think he had taken the most pains, and where we should naturally expect to find the most important and latest information, is the domains of the present Argentine Republic. For as we have already said, SANTA CRUZ had himself taken part in SEBASTIAN CABOT's expedition to these parts. Meanwhile the information resulting from this voyage had already found a place on RIBERO's two maps of 1529,[1] and besides this the map of 1542 has nothing of importance to present. It may be remarked, however, that we here find for the first time the name, *Rio de la Plata*, whose origin is uncertain, and that the name *Buenos Aires*, which also occurs here for the first time, shows a knowledge of PEDRO DE MENDOZA's expedition of 1535, which founded what is at present the largest city of South America.

KOHL and HARRISSE have directed our attention to OVIEDO's description of the whole eastern coast of America in his *Historia general y natural de las Indias*. Of this KOHL says: [2]

[1] With regard to how this probably took place, see KOHL's "Die beiden ältesten General-Karten von Amerika." Weimar, 1860, p. 147.

[2] Discovery of Maine, p. 307.

Oviedo relates, that in the year 1536, the Emperor Charles V. issued an order to this effect: "that the charts for navigators and the *padrones* should be examined and corrected by some learned and experienced persons," whom he selected for the purpose. In pursuance of this order, a map was constructed and issued by Alonzo de Chaves, representing the new Spanish discoveries, and the entire geographical knowledge of the time. Unhappily neither the original, nor even a good copy of this remarkable and important map of Chaves, has come to our knowledge. But Oviedo had it before him when he wrote his most interesting description of the east coast of America.

If Oviedo's description be compared with the map of Santa Cruz, we find their correspondence to be most surprising, which proves this map to be almost identical with Alonzo de Chaves's lost map; one part of Oviedo's description is, indeed, still more closely related to the Santa Cruz map.

Oviedo's description of the coast begins at Cape Virgines on the Straits of Magellan and extends thence to the North as far as to Rio de la Plata. He here abandons the direction towards the North and begins again at Cape S. Augustin, in order to follow the coast from that place towards the South, to Rio de la Plata. The reason for his so doing is, that in addition to the map of Chaves, for mapping this part of the coast, he has had access to a description by Alonzo de Santa Cruz, and he consequently follows the track of the latter during the afore mentioned voyage of Cabot in 1526. Of this Oviedo says: [1]

As I have not navigated on this coast and as I have found dissimilarities and some confusion of names on the maps, I am now going to describe it with exactness such as it is laid down by Alonzo de Chaves on the new map and such as I have heard it described by word of mouth by Alonzo de Santa Cruz, "el capitan y muy enseñado caballero y cierto cosmographo," who has navigated there and planned the coast during that voyage which was made by the Captain and "Piloto mayor" Sebastian Cabot and as I have been made acquainted with it by other persons who are of the same opinion as the said Santa Cruz.

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[1] Historia general y natural de las Indias. Publ. por D. José Amador de los Rios. T. II, Madrid 1852, p. 114.

It is evident from this that OVIEDO has not had access to any map by SANTA CRUZ, but that he has followed a description given by him verbally. In order to give the reader an opportunity of comparing the map here published with this description, as well as with that of the map of CHAVES, a summary of OVIEDO's expressions with regard to that part of the South American coast under discussion will be added.

The first landfall on Tierra Firme, made by SEBASTIAN CABOT on the other side af the Equator, was that which is above the port or river *Fernanbuco*, which is situated in lat. 8° S., whence a caravel went to look for water on the coast and arrived to that river called *Rio de las Piedras*, which is nearer to the Equator and seven degrees to the south thereof. Right between these rivers there is another, which is called *Rio de las Virtudes*. In Fernanbuco the armada was compelled to remain for three months on account of south-easterly and south-south-easterly winds which did not permit them to weather *Cabo de Sanct Augustin;* which is 12 leagues farther on by land, this Cape being situated in lat. $8^1/_2$° S. After three months, starting on Sanct Miguel's Day, they sailed round the said cape and arrived off *Rio de Sanct Alexo*, situated 24 or 25 leagues beyond the Cape. CABOT's armada kept on its course and came to the sea outside the river, called *Rio de Sanct Francisco*, which is situated lat. $10^1/_2$° S. or a little less, and half-way between this river and Rio de Sanct Alexo another river, called *Rio de Sanct Matheo*, disembogues. ALONZO DE CHAVES's new and correct maps name these rivers, between Cabo de Sanct Augustin and Rio de Sanct Francisco, *Rio Primero* and *Rio Segundo*, but their proper names, which they were given by the Christians, are, as mentioned, Rio de Sanct Alexo and Rio de Sanct Matheo. From the said Cape to Rio de S. Francisco the distance is about 45 leagues, and to *Rio de Sancta Ana* it is $17^1/_2$ leagues, which last mentioned river is situated in lat. $11^1/_3$° S. Beyond Rio de S. Ana is *Rio de Sanct Roque* and then *Puerto Real*, and farther south another river called *Rio de Sanct Hierónimo*, in the mouth of which there is a small island with a cliff. Then there comes *Bahia de Todos Santos* in lat. $13^1/_2$° S., which is 90 leagues distant from Fernanbuco.

Proceeding hence towards the South we arrive to a river called *Rio de los Cosmos* and, farther on, to *Rio de S. Augustin*, which is situated in lat. 15° S., and the distance thence from Bahia is 20 leagues, but the map makes it 30.

In Bahia de Todos Santos there is a small Bay called *Golfo de Todos Santos*. After Rio de S. Augustin there comes another, which is called *Rio de Sanct Jorge* and, further on, towards the south *Rio de la Magdalena*, *Rio de Sancta Elena*, *Rio de Sanct Gregorio*, *Rio de Sanct*

Johan, and *Rio de Sanct Chripstóbal*, one after the other. Here that coast begins outside which are situated the shoals called *los Pargos*, which are 42 leagues in length, but Rio de S. Chripstóbal is 63 leagues farther distant than Rio de S. Augustin, and the former is situated in $18^{1}/_{2}$° S. From Rio de S. Chripstóbal to *Rio de S. Bárbara* the distance is 12 leagues and this last mentioned river is situated in lat. $19^{1}/_{3}$° S. Thence we arrive to an island, which is also called *Sancta Bárbara*, and which is situated 25 leagues to the east from Tierra Firme. It is situated in the same latitude as the mouth of the river, and the whole space between the island and the land is full of shoals.

Lest the reader may wonder at my deviation from the new maps, especially from the one just corrected by the Emperor's order (of which *padron* I have a copy from the hand of the Royal Cosmographer Alonzo de Chaves), I now, before I proceed, must give an account respecting the difference existing between this map and that which is here said respecting the coast-line from Rio de S. Augustin to Rio de S. Bárbara. This coast-line I have described according to the accounts given to me by Alonzo de Santa Cruz, a man of learning and experience, who has travelled there and who, according to what I have already said, was one of Sebastian Cabot's principal companions during his voyage; he was, besides, one of the deputees appointed to amend and correct the sea-charts (*para la correçion de las cartas de navegar*). Some of the names he mentioned to me I have not found in the aforesaid new map and I am in consequence going to give an account of what it contains.

From Rio de S. Augustin to the river, which ought to be Rio de S. Bárbara, but of which the map does not give the name, — yet mentioning the island, which has been called Sancta Barbara here above — the distance is 70 leagues and, at the end of this line, the map places *Baxos de Abreojos*. To the south of Rio de S. Augustin the map places *Golfo de la Playa* and still farther to the south *Rio de las Ostras*, *Rio de Sancta Ana*, *Rio de los Cosmos*, *Rio de las Virgines*, *Punta Segura*, *Rio del Brasil*, and *Rio de Sanct Jorge*, and, about 20 leagues farther on, we come upon Cabo de Abreojos situated W. of the aforementioned island Sancta Barbara. This cape and the island the map places in scarcely 19° S. Thus there is a difference in latitude of more than 20 min.

In the open sea the map furthermore places three islands, one to the east of the other. The first, is situated 40 leagues towards the east and is called *Ascension;* 30 leagues to the east thereof is the island *Trinidad* and at 50 leagues still more east the island *Sancta Maria de Agosto* is situated. From thence to the said Cabo de Abreojos on the continent it is not much less then 200 leagues in a direction from E. to W. Again two islands without any name are drawn on the map: the one 20 leagues S.S.E. of the island Sancta Maria de Agosto, the

other 30 leagues towards S.E. I know not whether they are passed over by the drawer of the map or whether he has been ignorant regarding their names, and for this reason I do not mention them.[1]

Returning to the account of ALONZO DE SANTA CRUZ, he places the cape called *Cabo de San Pedro* 20 leagues to the south of Rio de S. Barbara, in lat. $20^1/_2°$ S. Hence to *Rio Hermoso*, where Baxos de Pargos cease, he makes the distance 10 leagues, and from this cape the coast bends towards S.W. 74 leagues as far as to *Cabo Frio* which is situated in a little short of $23^1/_2°$ S. Between the two last mentioned capes there is first of all *Bahia de San Salvador*, which is 28 leagues distant from the former and situated fully in $21^1/_2°$ S. At its mouth it encloses an island and a cliff. From this bay to *Rio de Sanct Alfonso* we count $17^1/_2$ or 18 leagues, and this river, which at its mouth encloses three islands, is situated in lat. $22^1/_3°$ S. Hence it is about 24 leagues to Cabo Frio and midway are situated those mountains, that are called *Sierras de Santa Lucia*. All these names of rivers and capes have been given by the Portuguese, who journey in this country and still farther on to *Bahia de Jenero*, which is situated 16 leagues more distant in lat. $23^1/_4°$ S.

I am now going to relate what the map tells us regarding the coast from the cape or river de Santa Barbara, alias Cabo de Abreojos, to Cabo Frio, which it places at a distance of 20 leagues from Cabo de San Jenero, which, again, is situated in rather more than lat. $19\frac{3}{4}$ S. Between the cape last mentioned and Cabo de Abreojos lies *Bahia de Santa Lucia*; 20 leagues farther on we come upon *Bahia de Angla* and another 10 leagues to the south are the Baxos de los Pargos. Yet 10 leagues more and we come to *Cabo de San Thomé* and 10 leagues farther on still, to *Rio de San Salvador*, from whence the distance to Cabo Frio is given as being 40 leagues. Between Rio de S. Salvador and Cabo Frio we have first *Golfo Hermoso* and then *Rio Delgado* and the coast-line between Cabo de Abreojos and Cabo Frio measures 95 leagues in length. I have considered it my duty to mention these disagreements between cosmographers and pilots, as my book at some time may fall into the hands of those who may want to examine what I have said about these coasts.

If we proceed on the way south towards Rio de La Plata, we find that the map gives 100 leagues from Cabo Frio to the line of demarcation towards the territory of the Portuguese, on the other side of which neither they nor anybody else may sail without permission from the Emperor, our sovereign, as the land belongs to the crown of Castile. The line mentioned crosses a cape called *Buen Abrigo*,

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[1] ALONZO DE SANTA CRUZ names on his map one of these two islands *Isla de Juan Steves;* neither of them exists in reality.

where lie the mountains called *Sierras de San Sebastian.* Through these the Tropic of Capricorn passes. On the said line of 100 leagues we meet first, 30 leagues from Cabo Frio, the mouth of a gulf into which two rivers, *Rio Joulan* and *Rio del Sombrero* disembogue; and the country, which borders this gulf on the south side, is *Tierra de Jenero.* Twenty leagues farther on there is a large bay, in which lay one large and a few small islands, and this bay is called *Passo de las Almadias;* inside the same is the land called *Tierra de los Magos*; while 10 leagues farther on we come to *Golfo de los Reyes* and then to *Islas de Coles* and *Rio de Culpare* and, finally, to the Cape and the Mountains of San Sebastian. Cabo Frio is situated in nearly 23° S. and the mountains spoken of, from whence the line of demarcation is counted, in full 23° S.; but the Tropic passes ½° to the south of Cabo de S. Sebastian, because the Southern as well as the Northern Tropic is 23½° from the Equator.

To return to the cosmographer Alonzo de Santa Cruz, he says that 16 leagues separate Cabo Frio from *Bahia de Jenero*, which he places lat. 23¼° S., and that the coast runs, he declares, 80 leagues from E. to W. from Cabo Frio to *Bahia de San Vicente.* Chaves's map states this distance to be more than 130 leagues, as the coast turns to W.N.W. 30 leagues or more from the above named mountains of S. Sebastian. Santa Cruz therefore gives 50 leagues less than the map. Santa Cruz says further that in Bahia de Jenero a river disembogues called *Rio de la India*, and that there are two uninhabited islands in the bay, and moreover at its mouth five small, likewise desolate isles. He gives 10 leagues from Bahia de Jenero to *Bahia de los Reyes*, which bight has two uninhabited islands at its mouth. And then 5 or 6 leagues farther on, near to the coast, there is an island, which is called *Isla de las Coles*, and 10 leagues farther on still another which is called *Isla de los Puercos*, because of the numerous wild boars living there. Right opposite to this island and 8 or 10 leagues out in the sea, there are two small islands on which a Portuguese vessel was wrecked and the crew saved themselves in a boat to the Boar island and thence to San Vicente.

Alonzo de Santa Cruz says, that 12 leagues from the last mentioned island *Rio de San Sebastian* is situated, at the mouth of which there is a large island and from thence it is 6 leagues to a small island called *Buen Abrigo*, which name it received during Cabot's voyage, his armada obtaining shelter there from a hard gale. Alonzo de Chaves places this island exactly on the line of demarcation and right opposite the *Sierras de San Sebastian*, more than 20 leagues on this side of Bahia de S. Vicente; and half-way on the last mentioned coast-line he places the River and Harbour of San Sebastian. Alonzo de Santa Cruz on the other hand counts 17 leagues from the Island and Harbour of

S. Sebastian to the Harbour of S. Vicente and places on this line two round little islands. In the Bahia de S. Vicente there are two islands and between them an islet. Both islands, the southernmost of which is inhabited by the Portuguese, are crescent-shaped and are drawn in the same form by ALONZO DE CHAVES.

I fully comprehend that those readers, who are not familiar with similar matters will find what I am now writing very unentertaining; but for the mariner and the cosmographer it should be very interesting and useful, as they will therefrom learn better than from the sea-chart itself, to know the country, where it is inhabited, where Christian people dwell, and which places are safe to call at and which they should avoid. To return to CABOT'S voyage, SANTA CRUZ says that 12 or 15 men, who had got tired of the sea, left the armada. and set off for a small Portuguese village in this port. Thence they betook themselves to *Bahia de la Cananea*, in the mouth of which there are two islands and another smaller island nearer to the coast and another still farther out towards the open sea. From this port the distance to Bahia de San Vicente is about 23 leagues. Bahia de la Cananea is situated at a little less than 25½° S. Between these two bays, two rivers discharge their waters, of which the first is small but the second, which is called *Ubay*, is a very large and splendid river. The distance is stated by both authors to be the same or 25 leagues, but with regard to the position CHAVES places Bahia de la Cananea in somewhat less than lat. 25½° S. Both the authors being trustworthy I cite the one as well as the other. SANTA CRUZ has visited and seen these regions and he, who made the map, has drawn it from hearsay, and thus the reader may himself decide which of the two he ought to give precedence.

Rio de Ubay is 50 leagues on the other side of the line of demarcation and of the Sierras de S. Sebastian. From Bahia de la Cananea it is 27½ leagues to *Rio de San Francisco* which is situated in fully 26½° lat. S. On the way between the two places last mentioned there are two rivers, *Rio sin fondo* and *Puerto de la Barca*. The last has its name from Don RODRIGO DE ACUÑA, one of the captains in GARCIA DE LOAYSA'S armada, because he lost his boat there. Though called a river, it is no such thing; as it is but a large island separated from the mainland by a narrow channel, which appears like a river. This distance of 27½ leagues, as given by ALONZO DE SANTA CRUZ from Rio de S. Francisco to Bahia de la Cananea, amounts according to CHAVES'S map to 30 leagues and he places the river in lat. 27° S. From Rio de S. Francisco to *Puerto de los Patos* it is 22 leagues, and this port is situated in lat. 27½°. Midway there is a large island being in length about 12 leagues and in breadth 6. It is inhabited and on its northern side has a harbour, which was named

Puerto de San Sebastian by the Spaniards on CABOT's voyage, but the island is called *Santa Cathalina*. All around there are numerous islands and rocks, and 3 leagues more south there is an island, called *Isla de Reparo*. At a distance of 7 or 8 leagues to the south of *Puerto de los Patos* is the *Puerto de Don Rodrigo de Acuña* in lat. 29° S. and it contains two rocky islands close to the land. The map also places this port in the same latitude, 30 leagues to the south of Rio de S. Francisco. On the other side of Puerto de Don Rodrigo, 12 leagues off, there is another harbour called *Farallon* in lat. 29⅔° S. Here there is a large and splendid river and a numerous Indian population; in the mouth is an island and 8 leagues away in the sea, a rock, whence the harbour has got its name Puerto del Farallon. On the map this river is called *Rio Poblado*, and the distance from Puerto de Don Rodrigo is given by it as 20 leagues. On the middle of this line there is another river called on the map *Rio cerrado*. Rio Poblado is placed in lat. 30⅓° S. From Rio Poblado, alias del Farallon, the distance is about 37 leagues to *Rio Tibiquari* which is a very mighty river in lat. 32° S. On the other side of this river there is another called *Etiquari*. As regards the distance, the map of CHAVES states this to be the same and places, as does SANTA CRUZ, the centre of the mouth of the large river Tibiquari in lat. 32 S. From this river it is about 48 leagues to *Cabo de Santa Maria*, and this cape is situated in lat. 35° S. The whole coast is inhabited by a people called *Janase Vequaes*, who are of a large growth like Germans or even larger. Four or five leagues before we arrive at the last mentioned harbour there is a large bay into which a large river opens out; and close to the said cape there is an island, which is called *Isla de las Palmas*, behind which many vessels can lay in security. Towards the Equator this cape borders on the bay of discharge of Rio de la Plata, called *Rio de Paramá* by the Indians. The Christians mostly call it *Rio de Solis*, after its discoverer the pilot JUAN DIAZ DE SOLIS. The map places it in lat. 34¾° S. The said island is not called by CHAVES Isla de las Palmas, but *Isla de Lobos*, and 20 leagues S.W. of the said cape there is another island, called *Isla de Christóval Jaques*. A few other small islands are situated outside the same river in an easterly direction and they are called *Islas de Rodrigo Alvarez*. Thus there are altogether four islands, one more easterly than the other. The bay of discharge of Rio de la Plata is 30 leagues broad from Cabo de Santa Maria to *Cabo Blanco*, which, according to SANTA CRUZ, is situated in lat. 27¼ S., but the map gives a breadth of only 20 leagues to the mouth and places Cabo Blanco in lat. 35½°, which seems to me to be a difference far too considerable. The Cosmographer DIEGO RIBERO, who was considered to be a man of experience, places Cabo de Santa Maria in lat. 35° S. and says that the mouth of the river has a breadth

of 20 leagues from Cabo de Santa Maria to Cabo Blanco, which he names Cabo de Antonio and places in lat. 36° S. But, for my part, I believe the statements of Alonzo de Santa Cruz regarding the distances and latitudes to be the most reliable.

Of all the names that can with certainty be distinguished as mentioned on the map of Alonzo de Santa Cruz as being on the coast-line from Rio de Piedras to Cabo Blanco, there are only eight which do not appear in the description given here. These names are: —

Rio de San Miguel.
Rio de Cana Fistula.
Rio real.
Rio de laduda.
Rio de Juan Stevez.
Cabo de San Julian.
Rio baxo.
Rio ciego.

That the description contains many more names than the map is not to be wondered at, considering the reduced scale of the latter.

With the same prolixity Oviedo continues his description of America's eastern coast as far as to "la tierra que llaman de Labrador" in the North. The last part of the description from Florida towards the North, has been made the subject of a critical discussion by Kohl, who says that the description "is much more correct and more in accordance with the features of the coast, as represented on modern maps, than the map of Ribero of 1529".[1] The map of Alonzo de Chaves being, as mentioned, lost, the map of Alonzo de Santa Cruz ought to be of great interest when compared with Oviedo's description, with which it agrees in every essential point. This interest is increased by the fact, that the map of Chaves has been, as shown by Harrisse, a copy of *el Padron Real*, regarding which we are thus able to obtain, through Santa Cruz, a tolerably correct idea.

[1] J. G. Kohl, The Discovery of Maine, Portland 1869, p. 307.

On turning to the west coast of America, we find that Peru is represented according to the descriptions collected by Francisco Pizarro and Bartolome Ruiz on their voyages of discovery along the coast, and related by the former on his return to Spain in 1528. The southernmost point thus far discovered was Puerto de Santa (lat. 9° S.). Several names on Santa Cruz's map, for instance, *Quaque* (Coaque), *Puerto viejo*, and *Pachacama*, show that he was not ignorant of Pizarro's incursions up to 1534, when this conqueror sent his brother Hernando home with the royal share of the ransom for Atahualpa. Not far south of *Puerto de Caya* are seen four names, — *Los Reies*, which is the original name of the city of Lima founded 1535, *Val de Salaga*, *Puerto de Arequipa*, founded 1540, and *Tarapaca*. But whether these are contemporaneous with the making of the rest of the map, cannot now be determined, for the original writing has been erased and afterwards touched up in a dauby and unskilful manner. South of these we find a row of names (from *Bahia de Todos Santos* in the North to *Arracifes* in the South), some of which seem to indicate a knowledge of Almagro's march to Chili, in 1536—37. But all these have most likely been written on the map at a later date, perhaps by Alonzo de Santa Cruz himself. Even the few names in the interior of the South American continent are written more recently. All these later names are distinguished by italics in the list below.

On the west coast of Mexico, we see two remarkable inscriptions. California is called "the island discovered by Marquis del Valle," and the coast north of this point is called "the land to which Don Antonio de Mendoza sent out an exploring expedition." Here we have the two latest geographical dates which have been given a place on the map. Hernando Cortés, being appointed "marques del Valle de Oaxaca" in 1529, took formal possession of the Californian peninsula on the 3rd of May, 1535, although the news did not reach Spain till after 1537, when Cortés returned to Acapulco. The expedition, however, which the map tells us was undertaken at the command of the viceroy Mendoza, was either the journey of the monk, Marcos de Niza,

1539, undertaken for the purpose of searching for the rich countries and cities of which Cabeza de Vaca had brought home fabulous accounts, or the grand expedition to these same tracts, fitted out in the same year by Coronado.

On Santa Cruz's map there is no distinct coast-line north of California. Thus the map shows no connection between America and Asia, as is the case with many maps made at the same time, the earliest of which is the map of the world by Franciscus Monachus, 1525. Excepting the above mentioned connection between Europe and America, Santa Cruz, like the other Spanish chartographers, was not fettered by the geographical hypotheses of his times.

Thus on his map of the world we find no trace of a *Terra Australis.* The broad expanse of the Pacific is only interrupted by the *Island of San Pablo*, the *Tiburones*, and the *Ladrones*, discovered by Magellan, and the *Islas de Pintados*, discovered by Saavedra in 1528.

* * *

As has here been shown, Santa Cruz's map does not treat of any discovery later than 1539. It remains for us to point out an inscription on the map which refers to a fixed date. At the mouth of the Congo we read that "there were many converted to Christianity at this place thirty years ago." On Ribero's map of 1529 (The Propaganda Map), we read in almost the same words that the conversion here took place "twenty years ago." Both accounts refer to 1509, when the Portuguese missionary work in Congo gained a firmer footing. Thus it seems probable that, on his map of 1542, Santa Cruz copied without any change an inscription, which he wrote down as early as 1539; and it is not improbable that this was on the very map of which we gain a knowledge from the above quotation from Vanegas de Busto.

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It is not in the plan of this brief description to try to give an analysis of all the names on the map. Such an attempt would be almost useless since in regard to the names from the Portolanos in Europe and on the Asian and African coasts of the Mediterranean, I can refer the reader to the works of LELEWEL [1] and DESIMONI,[2] and as regards the names in the New World we have the comprehensive works of KOHL [3] and HARRISSE [4] as authorities. Although those names on the coasts of Africa and Asia which originated in the Portuguese voyages of discovery, have not been the subject of any thorough examination, some of the works cited in this paper contain much that is of interest with regard to the explanation of these names. On the other hand, in the hope of benefiting geographical research, I have given a complete list of all the names on the map. In making this list I have consulted all the facsimiles of contemporary chartographical works, which are within my reach.[5] It is possible, however, that some mistakes have occurred in copying a few names which were not plainly written. To exclude the possibility of such mistakes it would require a course of study which, owing partly to the comprehensiveness of the subject, and partly to the lack of proper sources of information, I have not been able to pursue.

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I will close these elucidations with a few remarks with regard to some Scandinavian names on the map, the meaning and derivation of which are not commonly known.

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[1] Portulan général, in the Atlas to his "Géographie du moyen âge", Bruxelles 1850.

[2] Atlante idrografico del medio evo annotato da C. DESIMONI e L. T. BELGRANO, in: "Atti della Società Ligure di storia patria", Vol. V, Genova 1867.

[3] Die beiden ältesten General-Karten von Amerika, Weimar 1860.

[4] The Discovery of North America, Paris 1892, p. 753—784.

[5] Besides the two maps of DIEGO RIBERO, more than once cited, the so-called CABOT mappemonde of 1544 has been of most use in this comparison, though the facsimile of it, published by JOMARD does not seem to be very trustworthy. Out of the 198 names given by SANTA CRUZ on the east coast of America, from Cape Race to Cape Virgines, we find no less than 138 on the CABOT map.

In the extreme North we read "*Engrovelant*" and "*Margarister*".

The first name, which means Greenland, we find on the well-known Nancy map of the North,[1] in the form "*Engromelandi*", but it is here placed to the northern part of Norway, while Greenland bears the more correct name, "*Gronlandia Provincia*". Professor GUSTAV STORM of Christiania has given us an ingenious interpretation, which I fully corroborate; namely, that "*Engromeland*" is an incorrect spelling of "*Engromanneland*", and means the province of *Ångermanland* in the northern part of Sweden.[2] This word's resemblance in sound to *Groneland* has caused it to be transferred to Greenland, and there we find it with a few variations, together with the more correct forms, "*Gronelandia*", and "*Gronelanth*", not only on the Zamoiski map of Warsaw, but also on two of the Scandinavian maps lately discovered in Florence.[3]

It is hardly necessary to point out the fact that the form "*Engroveland*" has played a part in the long contention with regard to the correct meaning of the Zeno map.

"*Margarister*", which occurs on other maps in the forms "*Magarester*" and "*Magarescer*", Professor STORM[4] has shown to be "Magerö", the most northern point in Norway, the island on which North Cape is situated.

In the peculiar compound "*Svetia et aliti lonasa*" we find another remarkable example of the distortion of names which may be brought about by a whole series of misunderstandings and mistakes in writing. SANTA CRUZ seems to have borrowed this inscription from RIBERO (The Propaganda Map) who writes the name, "*Svecia que aliter lonasas*". We find that this name is taken from the map of Scandinavia (*Tabula*

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[1] Vide the facsimile in: A. E. NORDENSKIÖLD, Studier och forskningar föranledda af mina resor i höga Norden, Stockholm 1883, Pl. 2, and in *Ymer*, 1891, Pl. 1.

[2] Den danske Geograf Claudius Clavus eller Nicolaus Niger af Prof. Dr. GUSTAV STORM, in: *Ymer*, 1891, p. 36.

[3] Bidrag till Nordens äldsta kartografi, vid fyrahundraårsfesten till minne af nya verldens upptäckt, utg. af Svenska Sällskapet för Antropologi och Geografi, Stockholm 1892, Pl. 2 & 3.

[4] *Ymer*, 1891, p. 20.

moderna Prussie, Livonie, Norregie et Gottie) contained in the Roman edition of Ptolemy, 1507. There *above* the unmistakable contours of Venern, the largest lake of Sweden, we read the following words: —

· SVETIA · QVE ET-
· ALIT̃ IONALAS ·

The Spanish chartographer has apparently supposed that these two lines form one sentence, although it is quite obvious that the continuation of the upper line is to be found on the map a little way to the south-east, where we read the words: —

GOTTIA OCCIDENTALIS ·

On the other hand, it is not so easy to say where the words in the lower line do belong. We find them in print for the first time on the Scandinavian map in Ptolemy, Ulmæ 1482, where we read in the same connection as above: "*alit' ionalac⁹.*" That this was misunderstood even by contemporary writers appears from the text of Ptolemy Ulmæ 1486, where we find a place called "*Aliter ionasas*". It is quite evident, however, that these words ought to be read together with the inscription occurring on both the above mentioned printed maps *below* Lake Vener; namely: —

SCHRESE LAC[VS].

That this is the case is clearly proved by the map discovered in Warsaw by Baron Nordenskiöld (see *Facsimile Atlas*, Plate XXX) where in the same connection we read the words: *yona vel schrese lacus.* The solution lies near at hand. In the text of Claudius Clavus' map in the Nancy manuscript of Ptolemy, we find in the place of *yona* the better form *Vone lacus;* and *Schrese* is equivalent to the *Lacus Scarsa* given by the Portolanos. The denomination. of which the map now presented to the public shows the first part in an incorrect combination, we interpret as: *Venern or the Lake of Skara.*

LIST OF NAMES

ON

ALONZO DE SANTA CRUZ'S

MAP OF THE WORLD

1542.

N. B. — The names here printed in red are written with red ink on the original.

[Atlantic Coast of Europe.]

Pl. II. mare congelatum
Engrovelant
margarister
nuruega
pontus balteatus
horcades
Suetia et Datia
gotia meridionalis
Suetia ct aliti lonasa
gotia orientalis

[The Baltic]
goticum marc
gotia
sabulosus pontus
mare germanicum
selandia

---

datia Pl. II.
Scania

Rvsia Alba siue moscrouia
Sarmatia in europa
livonia
alba Rusia
Russia
alani montes
iperborei montes
Riphei montes

---

polonia maior
polonia minor
podalia

Pl. II. Germania Magna
marca nova
prussia
turingia
franconia
bohemia
austria
stiria
melgenburg
bauaria
sueuia
Saxonia
Reni provintia
suiceti
flandria
mare germanicum
chitumer
anburg
Riol
amasus
frisa
norovet
selanda
olanda
grabesen
artemna
arremna
branca

Anglia
Scotia
Irlanda
anglicum [mare]

Galia
canpania
burgundia
avernia
bela francia
borbonia
picardia
bretana
poituxo
berri
guiana
gasconia

[The Channel] Pl. II.
cales
ostenda
galicum [mare]
Rochela
burdes
carcaxan

Hispania
navarra
vescouia
galicia
leon
castilla
castilla
andaluzia
murcia
aragon
cantabricum [mare]
fuente
sebastian
bilbao
castro
lare
aviles
ciba
corunna
c. finisterre
s. tiago

Portugal
vila
porto
buar
berlingas
lisboa
setubal
santarem
traia
c. de s. viceinte
lagos

arena
sevilla

Mare Mediterranevm.

Pl. II. Hispania

beticum mare

gibraltar
estepona
malaga
salobrena
almeria
c. de gata
cartagena

ibericum [mare]

c. de pa[los]
alicante
c. de denia
salina
tortosa
salsas

balearicum [mare]

mallorċa
menorca
Iviça
formentera

Galia

galicum [mare]

narbona
Ruisellon
aguas muertas
R. arles
odoche
R. odoche
marsella
frejus

Italia

saboia
lombardia
valesia
calabria
lapulia

ligusticum [mare]

niça
villafranca
saona
arasim
genova
nerui
puerto fin
puerto venere
puerto specie
pisa

tirrenum [mare]

liorno
cinita vieja
roma
terra nova
napol
sales
rijolis

sardoum [mare]

corçega
cerdeña

Sicilia

malta
pantanalea
lampadosa

mare adriaticum

otranto
loreto
venecia
limara
cavjle
grado
aquile

esclavonia

triste
istria
cita nova
sore
novia
spargo
scordi
cataro
dulcino

Pl. II.

Pl. II.

duraco
palorno
lavelona

Grecia
ionicum [mare]
la morea
creticum [mare]
candia
egeum [mare]
achaia
negroponte
Seruia
macedonia
saloniche
tracia
casandria
propontidis
costantinopla

valachia
moldavia
transsilvania
hungaria

Pontvs Evxinvs
mauro
varma
glocia
su[lina]
licostania
falconera
naria
moncastro
flordelis
boristenes fl.
Tartaria moscoviensis
pidea
megaria
salina
taurica chersonesus
siordi
tabardi
tanais fl.

Sarmatia asiatica
marilocos
c. toxeto
puerto migelo
Colchos
goto
timesa
garbida
negopotine
polisterno
Lobati
Iberia
Asia Minor
capadocia
galacia
licia
caria
panphilia
silisia
armenia minor
armenia maior

trapisonda
sirizonda
s. thomas
s. virgen
leona
caroso
castelas
tripolj
suxasti
paterni
maxia
giron

---

troas
dardania
tola
tulac
C. coxme
selidonia
laiasa
rodum [mare]
rodus
siriacum [mare]
chipre

Pl. II.

 Siria
phenicia
samaria
judea
iherusalem
palestina

alexandria
soldi
tripol
tiro
sidon
pesara
barut
arcafa
Jafa
berardo
Marmarica et Egipthvs
egitiacum [marc]
c. de gal
raxalceto
damiata
casar boguer
alexandria
puerto viejo
golfo de arabo
c. daraos
lagoscco
palberton
Cirenaica
cirenaicum [mare]
racaçales
lucho
trabuco
patriarca
forçeli
bonandria
docia
c. Rasancen
tolometa
Sirtes
Libia
libicum [mare]
berinche
y. de coles

licodia
c. desorta
casar mahomet
lasura
mexorata
tripol de berberia
casar sanson
tripol viejo
y. de los gerbes
capis
africa
nobia
Africa
aphricum [mare]
tunez
c. cartago
c. soler
tonbarca
bona
c. ferre
alcol
bujaramen
bugia
c. del cabron
Nvmidia
numidicum [mare]
tedelis
argel
brisqui
tenes
mostagan
arcem
oram
c. falco
onc
Mavritania
barbaricum [mare]
guardia
melilla
alcudia
belez
taraxa
tituan
ceta

[West Coast of Africa.]

Pl. II. Mavritania
athlanticum [mare]
anafe
azamor
c. dc cantin
çafin
R. de los esclavos
mogodor
c. de seru
moniscr
c. de nan
ansoler
R. grande
c. del bojador
pedrera
tierra alta
Getvlia
R. del oro
matas del gino
c. de s. maria
c. blanco
Gvinea
Ioloph Regio
yslas de los eneros
argaim
puerto de s. julian
c. de s. motas
c. darca
canaga
c. verde
Mandinga Regio
R. de gavia
c. Roso
gomasa
socidi
sierraleona
c. ganoso
R. del pichel
R. del salvador.
R. de cafe
sierraleona
R. nuevo Pl. II.
c. mesurado
b. de islas
R. del Junco
c. de las baxas
R. del ginoves
plaia Ruvia
Lamina
R. de s. viceinte
R. de palmas
R. de maio
c. de 3 puntas
la mina
c. corço
aldea de la barca
Costa de Malagveta
R. de la buelta
c. de s. palos
quatro palmas
c. de lamota
R. del lago
plaia del ginoves
R. primero
R. de los esclavos
c. dc s. benito
R. del infante
golfo del rey
pesqueria
Biafar Regio
R. de los camarões
p. delgada
c. del isleo
R. del campo
R. dangla
y. de corisco
c. de lope gonçales Pl. V.
c. de catalina
sicrras de santi spiritus
c. primero
golfo de la iudia
los montes

PL. V. MANICONGO aqui ay muchos christianos convertidos de 30 anos aestaparte.

R. de manicongo
la madalena
R. de mondega
c. ledo
R. de s. lazaro
R. de s. Joan
c. de lobos
tierra alta
monte negro
golfo de aldeas
manga de las arenas
c. negro
c. de las balsas PL. V.
plaia de rui perez
c. del padron
plaia
puerto de la concibicion
plaia de lagunas
golfo de s. antonio
g. de s. thome
golfo de las bueltas
ysla[s] secas
monte de bjamjdos
R. del infante

CAPVT BONE SPEI

c. de las agujas

[EAST COAST OF AFRICA.]

PL. V.

c. del infante
c. de las varas
pesqueria
b. hermosa
R. de la laguna
yslas llanos
R. del infante
p. primera
tierra de navidad
postiera terra de navidad
pesqueria
R. de los reyes
R. de laguna
aguada de buena paz
plaia
c. de corrientes
c. de s. maria
c. del pichel
çofala
b. çerrada
costa de recha
R. de buenas senales
R. dangoja
yslas seguidas
angoja
mocambique
R. de s. antonio PL. V.
R. de s. gil
c. derecho
c. delgado
aquiloa
los tres hermanos
monfra
b. de rafael
zanzibar
y. penda
monbaça
melinde
pater
brada PL. II.
mongodoxo
opim
asum
c. de guardafuy

SINVS ARABICVS

y. blanca

MARE RVBRVM

mandaba
y. blanca
macna
maque

[Interior of Africa.]

Pl. II. Egipthvs
elefantina
Ethiopia svb Egitho
meroe
Troglodítica Regio
aqui abita el preste Juan de las indias. tienen tres bautismos de agua y fuego y sangre. guardan la dotrina de s. matheo.

Deserta Pl. II.
Deserta Libie
Libie interioris pars
Mavritania Cesariensis
Ethiopia
Montes Lvne ab is montibus paludes nili suscipiunt nives. Pl. V.

[Coast of Asia.]

Pl. II. Arabia Petrea
cuez
plaia
R. nego
sal medina
puerto guida
Arabia Felix
clibon
casa de meca
guida
Jazan
plaia
alli
mocha
estrecho de moca
adem
xabeque
c. Raso
fartan
macera
c. de forteca
diulfar
falcahat
anbez
muria
calhat
tibi
y. de macera

Scalonita Regio Pl. II.
curiata
c. de resalgat
calaiate
tibi
marlo
c. de mancandan
Sinvs Persicvs
tabla
igni
naban
tibi
beroa
coliar
xucar
mohi
lima
horbaz
Persia
bacera
comohorque
gues
bagan
conche
R. fondable
genga
reger
y. de quexome

Pl. II.

y. de oromuz

Carmania

agostan

c. de Jasque

mantaque

costaderia

vtaques

dulcinde

plaia

aqui comiença la primera india

Gedrosia

guzarate

dabul

gandel

gucirate

bremia

magalor

y. de diu y çibdad

plazel

indus fl.

Canbaia Regio

canbala Reino

ranel

curate

baxan

chaul

R. de mamdoba

dabul

R. de betela

goa

c. de Ramas

Narsinga Regio

baticola

magalor

monte deli

cananor

calicut

cochin

trava

C. comori

geiam

punta panifil

negopata

acanamor

c. cole

S. tome

arremogan

culetare

bimgan

montepole

paracote

pentapolin

R. çiego

punta hermosa

caligan

ranagran

nequepatan

R. baxo

comura

vripegan

calicote

camaraçan

coieraçan

punta solida

bengala

R. ganges

bengala

poralen

Reino de berma

candubi

Reino de pegu

Ansian Regio

tamal

plaia

tamari

martena

yslas quedas

R. ciego [1]

R. ciego

c. Rauba

malaca

R. hermoso

pulopulo

c. de çincapulla

de condor

Pl. II.

[1] Under the "R. ciego" written with red ink there seems to have been written in black the words "las neuve."

Pl. II. canboia
tierra de arenas
b. de las sierras
sierras primeras
puerto arenoso
R. del arena
yslas corrientes
barrasa
y. cotan
yslas de s. peilan
c. de anam?
y. de golfo?

y. de baxa Pl. II.
ilastigui

Lachina

cantan
matam
b. del rey
aguada d. s. tiago
R. de la acension
R. de sal
y. de s. ✠

[Islands of the Indian Ocean.]

Pl. II. aldenarinia
çacatora
ba de padua
yslas de maldiuar

Zeilan

adenço
yslas de cancafalla
yslas de nicobar
nicobar
ysla de oro
Pl. V. los 7 hermanos
abreojo
yslas que hallo vasco de acuña
ysla de la galera
y. de area
y. liva
sancti spiritus

Insvla Divi Lavrentii

c. salido
c. de s. maria
yslas de s. lorenço

manapata Pl. V.
matan
manasora
cacacanbo
aguada de s. auton
c. de maio
cianpero
b. de s. sebastian
S. andres
tierra de s. antonio
b. del plazel
tierra delgado

---

ba. de la judia
de Juan de lisboa
s. apolonia
ysla de mascarenas

---

la despoblada

[East Indian Archipelago.]

Pl. II. Zamatra Trapobana

paran
ysla blanca

timuan Pl. II.
yslas de pescadores
y. ara

Pl. II. plazel
y. de savallos
Pl. V. de savalos
mandelia
b. grande
salida de canel
Iava
y. de aboy
y. blanca
aguada
ahurban
Jupara
mandalia
lagrama
Provincia de Malvco
Japora
manope
nicopora
crimona
madora
Pl. IV. matra
timor
atafunfum

burney Pl. IV.
anbon
machian
motil
Gilolo Pl. III.
y. del rey
tidori
terrenate
candingar
burneo Pl. II.
San pedro
s. maria
cagayan
mendanao
b. hola
poluguan
siquios
çubu
matan
cailon Pl. III.
hanham

[Interior of Asia.]

Pl. II. Albania
Mare Caspivm
Hircania
Mesopotania
eufrates fl.
tigris fl.
Babilonia
caldea
Media
Margiana
Batriana
Paropanisvs
Deserta Carmanie
Aracosia
Dragiana

Scithia Pl. II.
Tartaria pertotvm
Scithia intra Imavm Montem
Sacarvm Regio Prima
Mvrevli Regnvm
Scithia extra Imavm Montem
India intra Gangem
India extra Gangem
Los Sencios
Provincia Mangi
Provincia Cathai
Amagoch
Cairan Provincia
Tangvt

[Islands of the Atlantic.]

Pl. III. yslanda
de brasil
las maidas
y. baxa
y. verde
y^{a} de juan steves
la bermuda

Insule portugalensium que vocantur de los açores
s. maria
s. miguel
la tercera
S. Jorge
graciosa
faial
y. de flores

la madera
salvosas

Insule fortunate que vocantur de canaria
fuerte ventu
lançarote
canaria
tenerife
gomera
la palma
hierro Pl. III.

Insule portugalensium que vocantur de cabo verde
y. de sal
buena vista
y. de maio
S. tiago
s. miculas
s. luzia
s. viceinte
s. anton

y^{a} del prinçipe Pl. II.
y^{a} de s. thome
y^{a} annobom Pl. V.
S. matheo
lacension
S. ✠
S. elena
de fer^{do} loroña Pl. IV.
ys^{a} de Juan stevez
s. maria
trinidad
acension
de tristan dacuña Pl. V.
de Juan steves
de sanson Pl. IV.

[West Indies.]

Pl. III. bahama
yucaiones
abacoa
cigateo
yuma
yameto
triangulo
ynagua
caicos
aruana
ba. de babueca

Cvba Pl. III.
c. de s. anton

Spañola
s. domingo
c. del tiburon

Jamaica
San Juan
S. ✠
virgines
anegada

Pl. III.

sonbrero
barbada
monsarrate
guadalupe
la deseada
barbudos
tabago
La trinjdad
s. luzia
s. viceinte
granada
margarita
orchilla
y. de aves

boinare
aruba
la serrana
s. catalina
s. andres
caimanes
alacranes
sarca
triangulo
de arenas
la bermeja
tortugas
martires

Pl. III.

[West Coast of North America.]

Pl. III. Tierra del Labrador
b. de las islas
Tierra de Bacallaos
C. Raso
C. de s. maria
C. de s. m[ar]co (?)
y. de S. elmo
tierra de bretones
C. grueso
R. de dos bocas
c. breton
S. Juan
canal de S. julian
R. grande
C. de la vuelta
b. de la ensenada
R. del castanar
Tierra de Stevan Gomez
c. de montanas
golfo
costa de medanas
R. de los gamos
C. de muchas isl.

arcipielago
C. de arracifes
R. de S. Juan bautista
R. de buena madre
C. de s. pedro
montanas
Tierra del licenciado Aillon
R. de S. antonio
b. de s. xl [cristóval]
b. de s. tiago
c. de s. tiago
C. de las arenas
C. de S. juan
R. salado
R. del spiritu santo
c. de Resalgat
R. de baxo
c. de canoas
R. jordan
C. de s. Roman
C. de ✠
R. de rincon

Pl. III.

[Gulf of Mexico and Isthmus.]

Pl. III.

Laflorida
b. honda
ancon baxo
b. de miruelo
b. de los baxos
Tierra de Panfilo de Narvaez:
dicha la Florida
R. de las baxas
arenal
b. de nieves
arracifes
R. de flores
matas del saluador
culata
mar pequena
R. del spiritu santo
C. de ✢
plazel
C. desierto
R. de montañas
R. del oro
R. de pescadores
R. de la madalena
C. bravo
R. de palmas
R. de panuco
tierra de pavos
C. Raso
R. de s. pedro y s. pablo

La Nueva España
la vera ✢
villarica
S. Juan delua
R. de banderas
R. de alvarado
R. negro
Ivcatan
R. de dos bocas
R. de grixalba
boca de tierras
R. de la gartos
catoche
g. de la yegueras

C. de 3 puntas
p. de caballos
trihonfo de la ✢
C. de honduras
C. del camaron
cartago
C. de gracias a dios
cerenaro
veragua
veragua
belen
nombre de dios

Pl. III.

[North Coast of South America.]

Pl. III

acla
carie
uraba
Provincia de Cartagena
c. caribana (?)
R. del oro
cartagena

Provincia de S. Marta
R. grande
C. del aguja
concha
tucaraca
S. marta
R. salado

Pl. III.

Pl. III.

puerto delarada
seturna
c. lavela

Provincia de Valencvela

c. de S. Roman
g. triste
p. flechado
R. oinare
c. delacodera
maracapana
S. fe
R. cumana
p. de araja

Provincia de Paria

c. de 3 puntas
aldea
caraibes
R. de paria
c. Raso

La Nveva Andalvzia

R. dulce
R. salido
R. verde
R. salado
R. baxo
R. de arracife (Pl. IV.)
R. de arazifes
R. desclavos
R. marañon

Pl. III.

[West Coast of South America.]

Pl. IV.

Costa del Brasil

b. de todos santos
b. de Juan de lisboa
c. de corrientes
pª de fuegos
c. delocste
tierra de s. vieeinte
tierra de humos
b. del plazel
C. del palmar
pª primera
c. blanco
c. de S. Roque
plazel
c. del pichel
R. primero
R. de piedras
R. de virtudes
pernambuco
C. de S. agustin
S. alexo
R. de s. miguel
R. de s. francisco
R. de caua fistula
R. Real
R. de laduda
b. de todos santos
ba
R. de Juan stevez
R. de s. agustin
R. del brasil
R. de s. jorge
C. de S. julian
salvador
C. frio.
R. de la judia
b. de genero
y. de coles
b. de los reyes
sierras de san sebastian
R. de s. sebastian
s. viceinte
de buen abrigo
vbuay (?)
la cananea
R. baxo
puerto de s. francisco
puerto de s. sebastian
y. de s. catalina
puerto de los patos
puerto de don Rodrigo
R. ciego

Pl. IV.

Pl. IV.

faraiol
tibiqueri
vbuai (?)
?
c. de s. maria

Provincia del Rio de la Plata

r. de la plata
R. vruay
R. parana
R. paraguai
ipitin
Sti spiritus
buenos aires
c. blanco
arenas gordas
b. anegada
tierra baxa
barreras blancas
c. de 3 puntas
b. sin fondo
arracife de lobos
c. de s. domingo
p. de los leones
c. blanco
b. de Juan serrano
b. de los trabaxos
tierra de baxos
sierras hermosas
b. de s. Julian
R. de s. ✛
c. de las virgines
estrecho de magellanes

Pl. IV.

[Tierra del Fuego.]

Pl. IV.

sierras de humos
del lago
sierras nevadas
canpana de Roldan
ys. nevadas

Pl. IV.

[Pacific Coast of America.]

Pl. IV.

Pro. del Estrecho Magallanes

b. de la vitoria
arcipielago del cabo deseado
arracifes [1]
lagrabara
R. de manco [maule?]
chile
hormigas
antipolo
despoblada

La Nveva Toledo

b. de todos santos
tarapaca
puerto de arequipa
val de salaga
los reies
puerto de caya
yslas de *ecos* [2]

Provincia del Perv

chincha
pachacara
puerto de la concibicion
palmonga
sierra morena
de sardinas
puerto de paita
c. blanco
S. miguel
c. de languilla
R. de tumbes

Pl. IV.

[1] The names in italics are of later date. See page 26 above.

[2] "Ecos" is also written at a later date instead of an erased word which was probably "lobos."

Pl. III.

c. de s. clena
de clara trihala
callao
puerto viejo
pasao
quaque
c. de s. francisco
b. de s. mateo
R. de s. tiago
R. de s. francisco
y. del gallo
c. quemado
p. decierta
R. primero
s. miguel

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panama
natan
punta de guerra
R. de gerra
y. de s. maria
ys. de buena matia
p. de la borica
y. del campo
punta de s. maria
golfo de s. lucas
g. de faraiol blanco
golfo de san tiago
nicaragua
R. de mesa

b. de fonseca
c. hermoso
b. de quirotega
R. del campo
R. grande
los frailes
guatimala
golfo de guaçocan
punta de cortes
coira
tegucantepeque del marques
R. çerrado
los pelagios
tegucantepeque
çacatula
c. delisleo
colimac
plaia
ancon

La Nveva Galizia

R. grande
y. blanca
golfo salido
R. del spiritu santo
colimar
y^a que descubrio el marques del valle
tierra que enbio a descubrir don antonio de mendoça

Pl. III.

[Interior of South America.]

Pl. IV.

El Qrito[1]
caxamalca

pachacama
el cuzco

Pl. IV.

[Islands of the Pacific.]

Pl. IV.

yslas bj[*scainas?*]
d. s. pablo
de tiburones

yslas de negros
yslas de pintados
yslas de los ladrones

Pl. III.

[1] The names in italics are of later date.

Of the phototypic facsimiles representing Santa Cruz's map one hundred copies are printed.